WHAT IS CLAIMED IS:

1. An area exposure dosimetry method comprising:

calculating an area of an irradiation region, and at least one of an area of an object region and an area of a non-object region in a radiation image obtained by radiographing an object;

acquiring an effective dose of radiation from a radiation generator; and

calculating an area exposure dose as a radiation dose of the object on the basis of the area of the irradiation region, the calculated one of the area of the object region and the area of the non-object region, and the effective dose.

2. The method according to claim 1, wherein said calculating areas includes recognizing the irradiation region, and at least one of the object region and the non-object region in the radiation image.

3. The method according to claim 1, wherein in said calculating, letting M be the effective dose, Sa be the area of the irradiation region, Se be the area of the object region, and Ss be the area of the non-object region, the area exposure dose is calculated by one of

M x Se/Sa and Mx (Sa - Ss)/Sa

4. The method according to claim 1, wherein in said calculating, if the non-object region is not present, the effective dose acquired in the acquiring step is set as the area exposure dose.

5. The method according to claim 1, wherein in said acquiring, the effective dose is acquired from an area dosimeter provided in the radiation generator.

6. The method according to claim 1, wherein in said acquiring, the effective dose is calculated from a radiation generation condition for the radiation generator.

7. An area exposure dosimetry method comprising:

recognizing a non-object region and an object region in a radiation image obtained by radiographing an object;

calculating a unit area dose as a radiation dose per unit area of the non-object region on the basis of the radiation image; and

calculating an area exposure dose as a radiation dose of the object on the basis of the unit area dose and the area of the object region.

8. The method according to claim 7, wherein in said calculating of the unit area dose, the unit area dose is obtained by conversion of an image signal quantity per unit area of the non-object region.

9. The method according to claim 8, wherein in said calculating of the unit area dose, the conversion is performed by multiplying the image signal quantity by a predetermined coefficient.

10. The method according to claim 7, wherein in said calculating of the area exposure dose, letting L be the

unit area dose and Se be the area of the object region, the area exposure dose is calculated by

L x Se

11. The method according to claim 9,further comprising:

acquiring an effective dose of radiation from a radiation generator; and

updating the coefficient on the basis of the effective dose, the image signal quantity, and the area of the irradiation region in the radiation image.

12. The method according to claim 11, wherein in said updating the coefficient, letting M be the effective dose, e be the image signal quantity, and Sa be the area of the irradiation region, the coefficient is so updated as to substantially convert (e x Sa) into M.

13. The method according to claim 11, wherein in said acquiring, the effective dose is acquired from an area dosimeter provided in the radiation generator.

14. The method according to claim 11, wherein in said acquiring, the effective dose is calculated from a radiation generation condition for the radiation generator.

15. An area absorbed dosimetry method comprising:

recognizing an irradiation region and a non-object region in a radiation image obtained by radiographing an object;

calculating a unit area dose as a radiation dose

per unit area of the non-object region on the basis of the radiation image; and

calculating an area absorbed dose as an absorbed radiation dose of the object on the basis of the unit area dose, the area of the irradiation region, and an overall image signal quantity of the radiation image.

16. The method according to claim 15, wherein in said calculating of the unit area dose, the unit area dose is obtained by conversion of an image signal quantity per unit area of the non-object region.

17. The method according to claim 16, wherein in said calculating of the unit area dose, the conversion is performed by multiplying the image signal quantity by a predetermined coefficient.

18. The method according to claim 15, wherein in said calculating of the area absorbed dose, letting L be the unit area dose, Sa be the area of the irradiation region, and j(i) be a dose which corresponds to an ith pixel of the radiation image constituted by n pixels and is based on an image signal quantity of the pixel, the area absorbed dose is calculated by

$$L \times Sa - \sum_{i=0}^{n} j(i)$$

19. The method according to claim 17, further comprising:

acquiring an effective dose of radiation from a radiation generator; and

updating the coefficient on the basis of the effective dose, the image signal quantity, and the area of the irradiation region in the radiation image.

20. The method according to claim 19, wherein in said updating the coefficient, letting M be the effective dose, e be the image signal quantity, and Sa be the area of the irradiation region, the coefficient is so updated as to substantially convert (e x Sa) into M.

21. The method according to claim 19, wherein in said acquiring, the effective dose is acquired from an area dosimeter provided in the radiation generator.

22. The method according to claim 19, wherein in said acquiring, the effective dose is calculated from a radiation generation condition for the radiation generator.

23. The method according to claim 19, wherein in said calculating of an area absorbed dose, letting M be effective dose and j(i) be a dose which corresponds to an ith pixel of the radiation image constituted by n pixels and is based on an image signal quantity of the pixel, the area absorbed dose is calculated by

$$M - \sum_{i=0}^{n-1} j(i)$$

24. An area exposure dosimetry apparatus comprising:

an area calculating unit that calculates an area of an irradiation region, and at least one of an area of an object region and an area of a non-object region

in a radiation image obtained by radiographing an object;

an acquiring unit that acquires an effective dose of radiation from a radiation generator; and

a dose calculating unit that calculates an area exposure dose as a radiation dose of the object on the basis of the area of the irradiation region, the calculated one of the area of the object region or the area of the non-object region, and the effective dose.

25. The apparatus according to claim 24, wherein said area calculating unit includes an area recognizing unit that recognizes the irradiation region, and at least one of the object region and the non-object region in the radiation image.

26. The apparatus according to claim 24, wherein letting M be the effective dose, Sa be the area of the irradiation region, Se be the area of the object region, and Ss be the area of the non-object region, said dose calculating unit calculates the area exposure dose by one of

M x Se/Sa and Mx (Sa - Ss)/Sa

27. The apparatus according to claim 24, wherein if the non-object region is not present, said dose calculating unit sets the effective dose acquired by said acquiring unit as the area exposure dose.

28. The apparatus according to claim 24, wherein said acquiring unit acquires the effective dose from an area

dosimeter provided in the radiation generator.

29. The apparatus according to claim 24, wherein said acquiring unit calculates the effective dose from a radiation generation condition for the radiation generator.

30. An area exposure dosimetry apparatus comprising:

an area recognizing unit that recognizes a non-object region and an object region in a radiation image obtained by radiographing an object;

a unit area dose calculating unit that calculates a unit area dose as a radiation dose per unit area of the non-object region on the basis of the radiation image; and

a dose calculating unit that calculates an area exposure dose as a radiation dose of the object on the basis of the unit area dose and the area of the object region.

31. The apparatus according to claim 30, wherein said unit area dose calculating unit obtains the unit area dose by conversion of an image signal quantity per unit area of the non-object region.

32. The apparatus according to claim 31, wherein said unit area dose calculating unit performs the conversion by multiplying the image signal quantity by a predetermined coefficient.

33. The apparatus according to claim 30, wherein letting L be the unit area dose and Se be the area of

the object region, said dose calculating unit calculates the area exposure dose by

L x Se

34. The apparatus according to claim 32, further comprising:

an acquiring unit that acquires an effective dose of radiation from a radiation generator; and

a calibrating unit that updates the coefficient on the basis of the effective dose, the image signal quantity, and the area of the irradiation region in the radiation image.

35. The apparatus according to claim 34, wherein letting M be the effective dose, e be the image signal quantity, and Sa be the area of the irradiation region, said calibrating unit updates the coefficient so as to substantially convert (e x Sa) into M.

36. The apparatus according to claim 34, wherein said acquiring unit acquires the effective dose from an area dosimeter provided in the radiation generator.

37. The apparatus according to claim 34, wherein said acquiring unit calculates the effective dose from a radiation generation condition for the radiation generator.

38. An area absorbed dosimetry apparatus comprising:

a region recognizing unit that recognizes an irradiation region and a non-object region in a radiation image obtained by radiographing an object;

a unit area dose calculating unit that calculates a unit area dose as a radiation dose per unit area of the non-object region on the basis of the radiation image; and

a dose calculating unit that calculates an area absorbed dose as an absorbed radiation dose of the object on the basis of the unit area dose, the area of the irradiation region, and an overall image signal quantity of the radiation image.

39. The apparatus according to claim 38, wherein said unit area dose calculating unit obtains the unit area dose by conversion of an image signal quantity per unit area of the non-object region.

40. The apparatus according to claim 39, wherein said unit area dose calculating unit performs the conversion by multiplying the image signal quantity by a predetermined coefficient.

41. The apparatus according to claim 38, wherein letting L be the unit area dose, Sa be the area of the irradiation region, and j(i) be a dose which corresponds to an ith pixel of the radiation image constituted by n pixels and is based on an image signal quantity of the pixel, said dose calculating unit calculates the area absorbed dose by

$$L \times Sa - \sum_{i=0}^{n} j(i)$$

42. The apparatus according to claim 40, further

comprising:

an acquiring unit that acquires an effective dose of radiation from a radiation generator; and

a calibrating unit that updates the coefficient on the basis of the effective dose, the image signal quantity, and the area of the irradiation region.

43. The apparatus according to claim 42, wherein letting M be the effective dose, e be the image signal quantity, and Sa be the area of the irradiation region, said calibrating unit updates the coefficient so as to substantially convert (e x Sa) into M.

44. The apparatus according to claim 42, wherein said acquiring unit acquires the effective dose from an area dosimeter provided in the radiation generator.

45. The apparatus according to claim 42, wherein said acquiring unit calculates the effective dose from a radiation generation condition for the radiation generator.

46. The apparatus according to claim 42, wherein letting M be effective dose and j(i) be a dose which corresponds to an ith pixel of the radiation image constituted by n pixels and is based on an image signal quantity of the pixel, said dose calculating unit calculates the area absorbed dose by

$$M - \sum_{i=0}^{n-1} j(i)$$

47. A storage medium readable by a data processing

apparatus, said storage storing a program which is executable by the data processing apparatus and comprises program codes realizing the area exposure dosimetry method described in claim 1.

48. A storage medium readable by a data processing apparatus, said storage storing a program which is executable by the data processing apparatus and comprises program codes realizing the area absorbed dosimetry method described in claim 15.

49. A radiographing apparatus comprising:

each means described in an area exposure dosimetry apparatus defined in claim 24; and

an image sensing unit that acquires the radiation image.

50. A radiographing apparatus comprising:

each means described in an area absorbed dosimetry apparatus defined in claim 38; and

an image sensing unit that acquires the radiation image.